

# Work Order ID 70362

Friday, June 03, 2011 12:43:55 PM



Page 1

Item ID: D206-642-541

Accept



Setup Start



Revision ID:

Item Name: Replacement Skidtube

Stop



Start Date: 6/3/2011 Start Qty: 1.00



Cust Item ID:

Required Date: 6/14/2011 Req'd Qty: 1.00



Customer:

Reference:

Approvals: Process Plan: CL

Date: 11/06/03

Tooling:

Date:

Run Start



QC:

Date:

SPC (Y/N):

Date:

Stop



Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

Draw Nbr

Revision Nbr

D3274

D

IIN-D206-642

Rev M

100

0.00



DOCUMENT CONTROL

DC

Memo

0.00

Document Control

Photocopy bluefile & type labels per PPP D206-642-541

CHG003

N/A *[Signature]*

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

\* NOTE: Date & initial all entries

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

110

0.00



Skidtubes

Skidtubes

Skidtubes

**Memo**

0.00

\*\*\*\*VERIFY AND INSPECT THE MATERIAL PRIOR TO USE\*\*\*\*

1- Bend FWD end of tube using bend prog D3274 FWD and foil 10 as per dwg D3274, cut fwd end of tube with saw table setup D3274.

2- remove fwd indexing ridge as per dwg D3274. Prepare for welding

3- weld fwd cap as per dwg D3274 and QS1004

AR Aluminum Rod Batch:

4- grind fwd cap weld on top surface only

5- Cut AFT end of tube at 170.9" as per dwg D3274 and deburr end.

6-Drill Aft cap pilot hole using DT8025

7 -Cleco DT8025 in position and install pilot hole drill Jig DT8742A,B,C,D.  
Drill 3/16" pilot holes as per Dwg D32748 -Remove inner indexing ridge on aft end of skidtube as per Dwg D3274 scribe  
batch #

9 -Open aft end cap holes to Ø0.208" as per Dwg D3274. Deburr aft end.

DD

11-7-28

BB

11/08/04

M112860 / M115778  
BE 11/08/05

BE 11/08/05

BB 11/08/09

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

114

QC5- Inspect part completeness to step on W/O

0.00

8 u/08/09



QC

Memo

0.00

Quality Control

116

QC10- Inspect visual per QSI004- ground welds

0.00

8 u/08/09



QC

Memo

0.00

Quality Control

120

Chemical Conversion Coat per QSI005 4.1

0.00

Ac 11.08.10



HandFinish

Memo

0.00

Hand Finishing

W/O:		WORK ORDER CHANGES					
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Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

130

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

1 0 BEU/08/11

150

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Open Ø0.313" and 0.375" crossbolt spacer holes as per Dwg D3274

2-Deburr crossbolt spacer holes as per Dwg D3274 and blow out chips from inside the tube

3-Bond web in place as per Dwg D3274 & QSI 015.

A/R ☐ Sikaflex-291 ☐ 11/25/10 ☐

Sikaflex expire date: ☐ 12/01/15 ☐

Start: ☐ 11/08/11 ☐ Time: ☐ 3:30 ☐

Finish: ☐ 11/09/11 ☐ Time: ☐ 7:00 ☐

(Adhere for 12 hours)

} Dh. 11/08/11

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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Run Start



Stop

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

160

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

Quality Control

1 0 BEH/09/06

170

Skidtubes

0.00



Skidtubes

Memo

0.00

Skidtubes

1-Bend AFT end of tube using bend prog. D3274 AFT as per dwg D3274. Install drop pins in crossbolt spacer holes to maintain web position.

2- DRILL PILOT HOLES FOR WEARPLATES USING D3274-1T2  
OPEN HOLES TO .297" . Deburr3-DRILL TOE PIN HOLE .640" DIA AS PER DWG USING DT8935 FWD  
END OF TUBE  
DEBURR INSIDE OF HOLE AS NECESSARY (DO NOT ENLARGE HOLES)  
REMOVE ANY FOREIGN OBJECTS INSIDE OF TUBES

4- Countersink crossbolt spacer holes as per Dwg D3274

5- prepare for welding

1 0 BEH/09/06

BB 11/09/07

W/O:		WORK ORDER CHANGES					
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Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

180

QC5- Inspect part completeness to step on W/O

0.00

h2 3.1'

Suloglog



0.00

L2 5.0"

QC

Memo

Quality Control

190

Skidtubes

0.00



0.00

Skidtubes

Memo

Skidtubes

1-Insert D2649 & D3275-1 crossbolt spacers. Weld as per QSI 004 and Dwg D3274. Remember to back drill each hole before welding the other side. Use aluminum rod

A/R ☐ Aluminum Rod ☒ M112862

BE 11/09/08

3-Grind cross bolt welds flush as per Dwg D3274.

BE 11/08/08

4-Counterbore 5/16" x 0.750" deep as per Dwg D3274 and deburr.

BE 11/09/08

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Cust Item ID:

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Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

200

QC5- Inspect part completeness to step on W/O

0.00



QC

Memo

0.00

8 u102109

Quality Control

210

QC10- Inspect visual per QSI004- ground welds

0.00



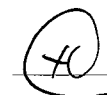
QC

Memo

0.00

8 u102107

Quality Control



220

Pressure Wash per QSI005 4.3

0.00



HandFinish

Memo

0.00

Hand Finishing

Re-alodine tube as per QSI 005 section 4.1.2.1 do not acid etch

H 8 m-111004/12

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

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Customer:

Reference:

Run Start



Approvals: Process Plan: \_\_\_\_\_ Date: \_\_\_\_\_ Tooling: \_\_\_\_\_ Date: \_\_\_\_\_

Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center IDOperation  
DescriptionSet Up/  
Run HoursTool ID Tool # Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

230

White Gloss(Ref:4.3.5.1) per QSI005 4.3-Alum

0.00



Powdercoat

Memo

START TIME:

OVEN TEMPERATURE:

FINISH TIME:

0.00

Powder Coating

240

QC3- Inspect Part Finish

0.00



QC

Memo

0.00

Quality Control

250

HandFinishing

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install Nut Plate as per Dwg D3274. Apply LPS-3 to Nut Plate and rivets.  
A/R □ □ SikaFlex-291 □ M1099562-Install inserts as per Dwg D3274. Use a drop of Sikaflex inside insert holes a  
A/R □ □ SikaFlex-291 □ 1118373Sikaflex expire date: □ 12/01

W/O:		WORK ORDER CHANGES					
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Stop



QC: \_\_\_\_\_ Date: \_\_\_\_\_ SPC (Y/N): \_\_\_\_\_ Date: \_\_\_\_\_

Sequence ID/  
Work Center ID

Operation  
Description

Set Up/  
Run Hours

Tool ID

Tool #

Plan  
Code

Accept  
Qty

Reject  
Qty

Reject  
Number

Insp.  
Stamp

260

QC5- Inspect part completeness to step on W/O

0.00



QC

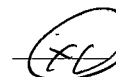
Memo

0.00

Quality Control

Inspect Nut Plate & Inserts

*5/11/09/12*



270

HAND FINISHING RESOURCE #1

0.00



HandFinish

Memo

0.00

Hand Finishing

1-Install wearpads & gaskets as per Dwg D3274.

2-Install ring as per Dwg D3274

A/R ☐ Sikaflex-291 ☐ *11/18/39* ☐

Sikaflex expire date: ☐ *12/01*

3-Inspect for foreign objects as per QSI 024

4-Spray inside of tube on both sides of web with LPS-3

A/R LPS-3 Batch: *11A*

5-Install Aft Cap and seal with Sikaflex. Clean excess adhesive.

A/R ☐ Sikaflex-291 ☐ *11/18/39* ☐

Sikaflex expire date: ☐ *12/01*

*1 0 11/18/13*

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DescriptionSet Up/  
Run Hours

Tool ID

Tool #

Plan  
CodeAccept  
QtyReject  
QtyReject  
NumberInsp.  
Stamp

280

QC5- Inspect part completeness to step on W/O

0.00

S work 13

②



QC

Memo

0.00

Quality Control

290

Identify as per dwg &amp; Stock Location: \_\_\_\_\_

0.00

72486

11/9/13



Packaging

Memo

0.00

Packaging

300

QC21- Final Inspection - Work Order Release

0.00

11/9/13



QC

Memo

0.00

Quality Control

MF  
11-09-13

W/O:		WORK ORDER CHANGES					
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**Required Qty: 1.00**

Component Item ID/ Item Name	Replacement Item ID	Mfg/ Purch	Bin Item	Primary Location	Last Location	Route Seq ID	Unit of Measure	Qty on Hand	Qty per Kit	Total Qty	Qty Issued	Date Issued	Status
D2600-1-190 		Manufactured	No			110	Each	34.4000	1	1			
Extrusion Round 3" 206													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				HALL	B69622	34.4						11-7-28	
					59874	34.4							
D3285-1 		Manufactured	No			110	Each	106.0000	1	1			
Cap													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG002		106							
					52511	59							
					52647	47							
D3282-041 		Manufactured	No			150	Each	6.0000	1	1			
Float Web (206L/407)													
				<u>Location</u>		<u>Loc Qty</u>		<u>Loc Code</u>					
				LG	72838	6							
					65293	2							
					66363	4							

W/O:		WORK ORDER CHANGES					
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# Picklist Print

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Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 6/3/2011

Required Date: 6/14/2011

Start Qty: 1.00

Required Qty: 1.00

D2649 Manufactured No

190 Each

75.0000

12

12



Cross Bolt Spacer



*8/21/09/08*  
*B 72704 x 12*

Location

Loc Qty

Loc Code

LG	63
68224	63
LG001	12
65317	1
68507	11

D3275-1 Manufactured No

190 Each

214.0000

12

12



Crossbolt Spacer



*8/21/09/08*  
*B 72123 x 11*

Location

Loc Qty

Loc Code

LG	34
67767	34
LG002	180
66930	108
68946	72

CR3212-4-03 Purchased No

250 Each

1,234.000

2

2



Cherry Rivet



*11/04/12*

Location

Loc Qty

Loc Code

FP-B	2
110139	2
ST311	1232
<u>114859</u>	1232

*VI*

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Shop Packet Print

Page 2

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries.



# Picklist Print

Friday, June 03, 2011 12:43:52 PM

Work Order ID: 70362

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 6/3/2011

Required Date: 6/14/2011

Start Qty: 1.00

Required Qty: 1.00

D3415-041 Manufactured No

250 Each

62.0000 1 1



Nut Plate



41 1109112

Location

Loc Qty

Loc Code

ST053

62

33842

18

67605

44

x1

CCR264SS3-3 Purchased No

250 Each

587.0000 2 2



Cherry Rivet



41 1109112

Location

Loc Qty

Loc Code

FP-B

2

113973

2

ST311

585

117086

85

117849

500

x2

ALS4-1032-130 Purchased No

250 Each

1,920.000 78 78



Insert



41 1109112

Location

Loc Qty

Loc Code

ST281

8

M118237

x50

117331

8

M118312

x28

ST282

1912

117717

1912

D3536-15 Manufactured No

270 Each

19.0000 1 1



Gasket



41 1109112

Location

Loc Qty

Loc Code

FP011

19

072881

y1

66559

19

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

•NOTE: Date & initial all entries

# Picklist Print

Friday, June 03, 2011 12:43:52 PM

Work Order ID: 70362

Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 6/3/2011

Required Date: 6/14/2011

Start Qty: 1.00

Required Qty: 1.00

D3536-23	Manufactured	No	270	Each	17.0000	1	1
							<u>xl 11/09/12</u>
Gasket							

Location

Loc Qty

Loc Code

FP011

17

B69902



xl

43406

1

66560

16

D3536-35	Manufactured	No	270	Each	32.0000	1	1
							<u>xl 11/09/12</u>
Gasket							

Location

Loc Qty

Loc Code

FP012

32

B71587

xl

66237



1

67599

5

69755

26

D3536-39	Manufactured	No	270	Each	37.0000	1	1
							<u>xl 11/09/12</u>
Gasket							

Location

Loc Qty

Loc Code

FP015

37



66241

11

69760

26

xl

D3535-15	Manufactured	No	270	Each	13.0000	1	1
							<u>xl 11/09/12</u>
Wearshoe							

Location

Loc Qty

Loc Code

FP018

13

B69931

xl

66558

7

68358

6

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

**NOTE:** Date & initial all entries

# Picklist Print

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Page 5

Work Order ID: 70362



Parent Item: D206-642-541





Parent Item Name: Replacement Skidtube

Start Date: 6/3/2011



Required Date: 6/14/2011

Start Qty: 1.00



Required Qty: 1.00

D3535-35      Manufactured      No      270      Each      32.0000      1      1  
            xl 11/09/12  
 Wearshoe



<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP018	12	
65926	1	1370815
67598	1	
68348	10	
ST	20	
69756	20	

D3535-39      Manufactured      No      270      Each      6.0000      1      1  
            xl 11/09/12  
 Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP018	6	
64076	6	1369759

D3535-23      Manufactured      No      270      Each      24.0000      1      1  
            xl 11/09/12  
 Wearshoe

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP021	24	
66236	1	B70818
67594	10	
68342	13	

D3537-3      Manufactured      No      270      Each      4.0000      1      1  
            xl 11/09/12  
 Wearpad

<u>Location</u>	<u>Loc Qty</u>	<u>Loc Code</u>
FP017	4	
35697	1	B72140
66230	3	

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Page 5

W/O:		WORK ORDER CHANGES					
DATE	STEP	PROCEDURE CHANGE	By	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector

Part No: \_\_\_\_\_ PAR #: \_\_\_\_\_ Fault Category: \_\_\_\_\_ NCR: Yes No DQA: \_\_\_\_\_ Date: \_\_\_\_\_

Resolution: \_\_\_\_\_ Disposition: \_\_\_\_\_ QA: N/C Closed: \_\_\_\_\_ Date: \_\_\_\_\_

NCR:		WORK ORDER NON-CONFORMANCE (NCR)						
DATE	STEP	Description of NC Section A	Corrective Action Section B			Verification Section C	Approval Chief Eng	Approval QC Inspector
			Initial Chief Eng	Action Description Chief Eng	Sign & Date			

NOTE: Date & initial all entries

# Picklist Print

Friday, June 03, 2011 12:43:52 PM

Work Order ID: 70362

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube

Start Date: 6/3/2011

Required Date: 6/14/2011

Start Qty: 1.00

Required Qty: 1.00

D3537-1 Manufactured No

270

Each

25.0000

9

9



9 11/09/12

Wearpad

## Location

## Loc Qty

## Loc Code

FP016

4

070687

✓9

68944

4

FP017

21

63313

2

66935

4

68944

15

AN960C10L

NAS1149C0332

Purchased

No

270

Each

0.0000

80

80



X118354



(80) 11/09/12

washer

AN960C416

NAS1149C0463

Purchased

No

270

Each

0.0000

1

1



X115358



(x1) 11/09/12

washer

D3672-1

Manufactured

No

270

Each

1,188.000

2

2



11/09/12

Phenolic Washer

## Location

## Loc Qty

## Loc Code

ST074

1188

64177

688

66821

500

X2





# Picklist Print

Friday, June 03, 2011 12:43:52 PM

Work Order ID: 70362

Parent Item: D206-642-541



Parent Item Name: Replacement Skidtube

Start Date: 6/3/2011



Required Date: 6/14/2011

Start Qty: 1.00



Required Qty: 1.00

AN3C4A Purchased No 270 Each 2,217.000 80 80  
  
 BOLT  HL 11/09/12

Location	Loc Qty	Loc Code
ST350	2217	M 118628
117094	715	x 80
117313	2	
117688	800	
117795	500	
117872	200	

AN4C5A Purchased No 270 Each 522.0000 1 1  
  
 BOLT  HL 11/09/12

Location	Loc Qty	Loc Code
FP-B	111	
112243	111	x1
ST345	411	
112243	411	

D2646 Manufactured No 270 Each 28.0000 1 1  
  
 Aft Cap  HL 11/09/12

Location	Loc Qty	Loc Code
FP006	27	B71070
62678	27	x1
FP-4	1	
69019	1	



# Picklist Print

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Work Order ID: 70362

Parent Item: D206-642-541

Parent Item Name: Replacement Skidtube



Start Date: 6/3/2011

Required Date: 6/14/2011

Start Qty: 1.00

Required Qty: 1.00

D3413-1

Manufactured No

270

Each

26.0000

1

1



xl 11/09/12

Ring

## Location

## Loc Qty

## Loc Code

ST420

19

070773

xl

62961

8

66387

11

ST473

7

66945

7



**DART**

RELEASED

07.02.12  
DEO ATTACHED

DESIGN CP	DRAWN BY PH	DART AEROSPACE USA, INC. PORT HADLOCK, WA	
CHECKED #	APPROVED #	DRAWING NO. D3274	REV. D SHEET 1 OF 4
DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY SCALE NTS	
A	04.03.15	NEW ISSUE	
B	04.08.09	MOVE SADDLE HOLE: 42.14 WAS 42.76	
C	05.03.16	ADD -043; NEW INSERTS	
D	06.12.19	NEW INSERTS, SS WEARSHOE + GASKET	

Qty -041	Qty -043	Part Number	Description
X		D3274-041	SKIDTUBE ASSEMBLY
	X	D3274-043	SKIDTUBE ASSEMBLY
1	1	D2600-1-240	EXTRUSION
1	1	D2646	AFT CAP
12	12	D2649	CROSS BOLT SPACER
12	37	D3275-1	CROSS BOLT SPACER
1	1	D3282-041	FLOAT WEB
1	1	D3285-1	CAP
1	1	D3413-1	RING
1	1	D3415-041	NUT PLATE
1	1	D3535-15	WEARSHOE
1	1	D3535-23	WEARSHOE
1	1	D3535-35	WEARSHOE
1	1	D3535-39	WEARSHOE
1	1	D3536-15	GASKET
1	1	D3536-23	GASKET
1	1	D3536-35	GASKET
1	1	D3536-39	GASKET
9	9	D3537-1	WEARPAD
1	1	D3537-3	WEARPAD
78	78	ALS7-1032-130	INSERT (or AKS4-1032-130, ALS4-1032-130, AELS-1032-130)
80	80	AN3C4A	BOLT
1	1	AN4C5A	BOLT
1	1	AN960C416	WASHER
80	80	AN960C10L	WASHER
2	2	CCR264SS3-3	RIVET
2	2	CR3212-4-03	RIVET
2	2	NAS1515H3L	WASHER

## GENERAL NOTES:

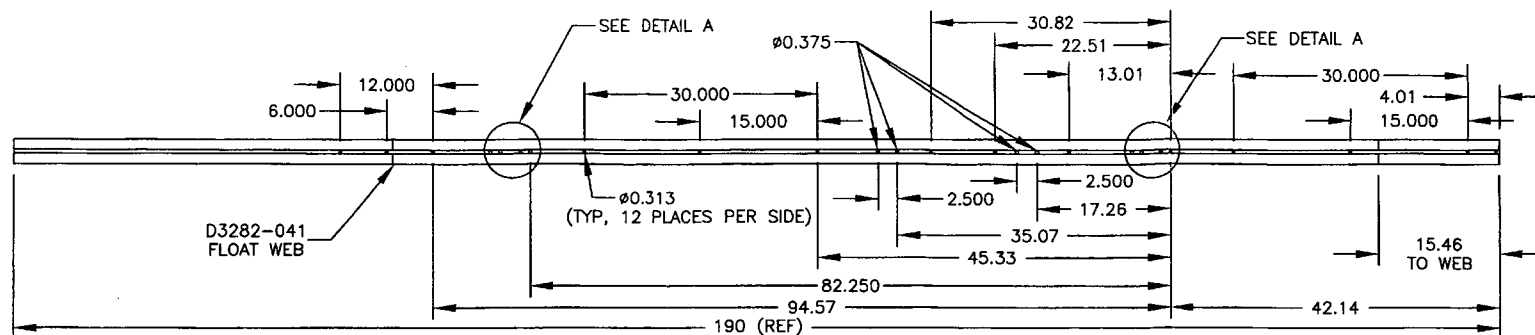
1. TOLERANCES ARE PER DART QSI 018 UNLESS OTHERWISE NOTED.
2. DAMAGE TOLERANCE ON FWD BEND:  
THERE SHOULD BE NO VISIBLE WRINKLES IN THE BEND FROM THE GROUND TO A HEIGHT OF 7 INCHES ABOVE THE GROUND. IT IS ACCEPTABLE TO POLISH OUT GOUGES UP TO 0.020 DEEP IN THE BENT PORTION OF THE TUBE. A MAXIMUM REDUCTION IN DIAMETER OF 0.150" IS ACCEPTABLE IN THE BENT PORTION OF THE TUBE.
3. ALL HOLES DRILLED ON CENTERLINES.
4. BOND D3282-041 FLOAT WEB INTO D3274-1/-3 OUTER TUBE WITH NON-STRUCTURAL SIKAFLEX-241/291 ADHESIVE PER DART QSI 015. ENSURE HOLES LINE-UP.
5. WELDING TO BE DONE PER DART QSI 004.
6. FINISH: - ACID ETCH, ALODINE ASSEMBLY PER DART QSI 005 4.1  
- POWDER COAT WHITE (REF. 4.3.5.1) PER DART QSI 005 4.3
7. DRILL Ø0.297 HOLES FOR ALS7-1032-130 INSERTS USING DT3274-1T2 BEFORE FINISH. INSTALL ALS7-1032-130 INSERTS AFTER FINISH. SEAL WEARSHOE BOLTS WITH SIKAFLEX -241/-291.
8. SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES "LPS-3" AFTER FINISH AND INSTALLATION OF INSERTS. COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES "LPS PROCYON" AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF POWDER COATING WITH MEK DEGREASER.

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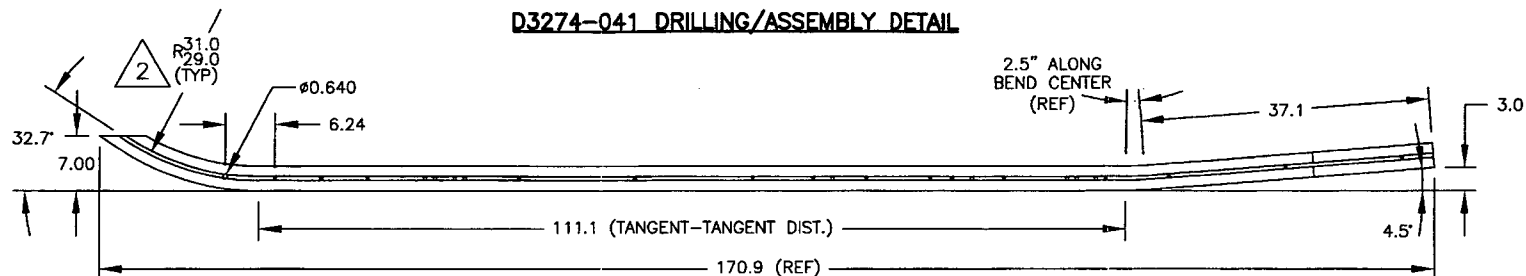
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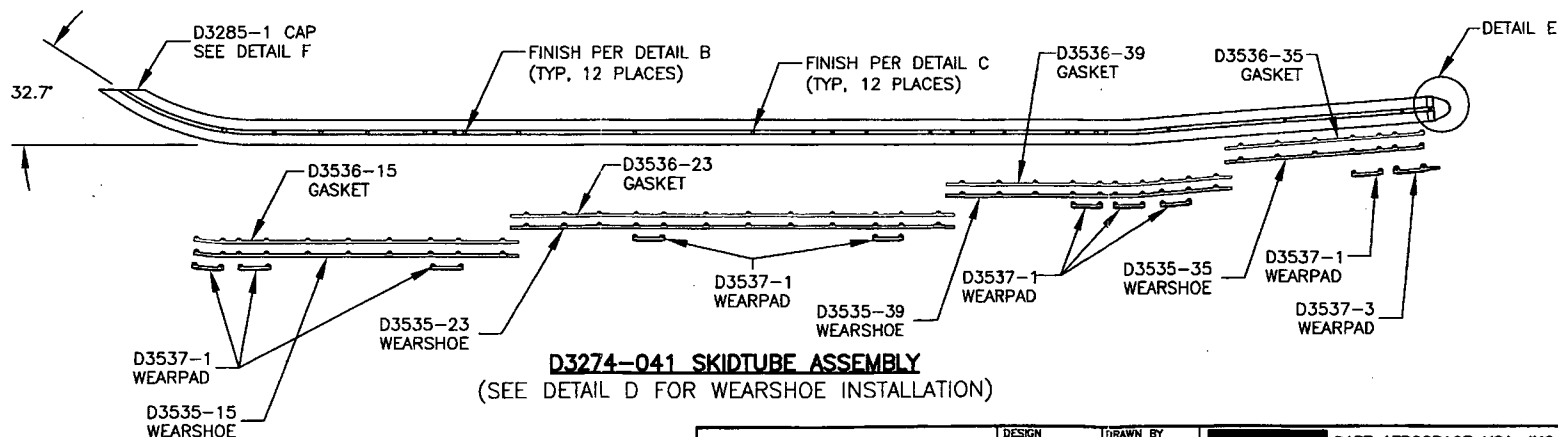
DEO ATTACHED



**D3274-041 DRILLING/ASSEMBLY DETAIL**



**D3274-041 BEND/DRILLING DETAIL**



**D3274-041 SKIDTUBE ASSEMBLY**  
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

RELEASED

07.02.12

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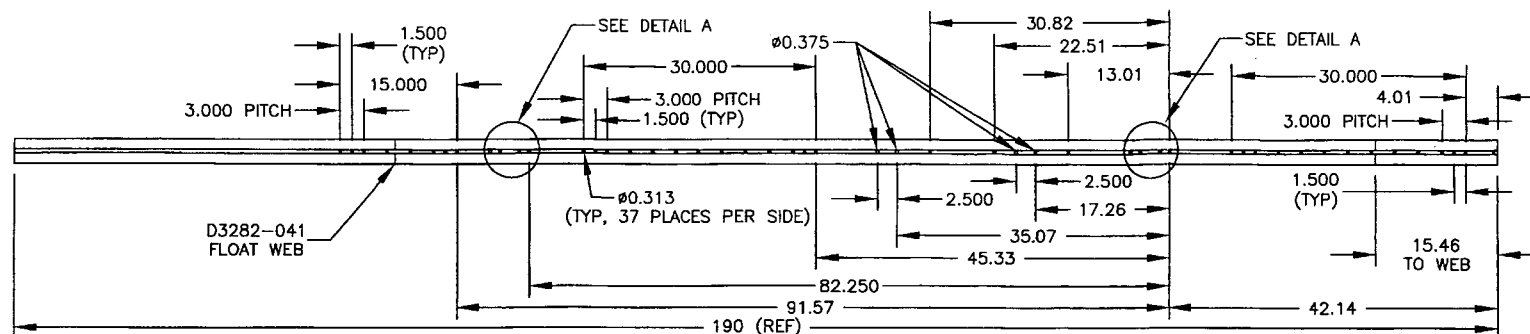
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DESIGN	CP	DRAWN BY	PH	<b>DART</b>	DART AEROSPACE USA, INC.
CHECKED	#	APPROVED	#	DRAWING NO.	D3274
DATE	06.12.19	TITLE	SKIDTUBE ASSEMBLY	REV. D	SHEET 2 OF 4
				SCALE	1:15

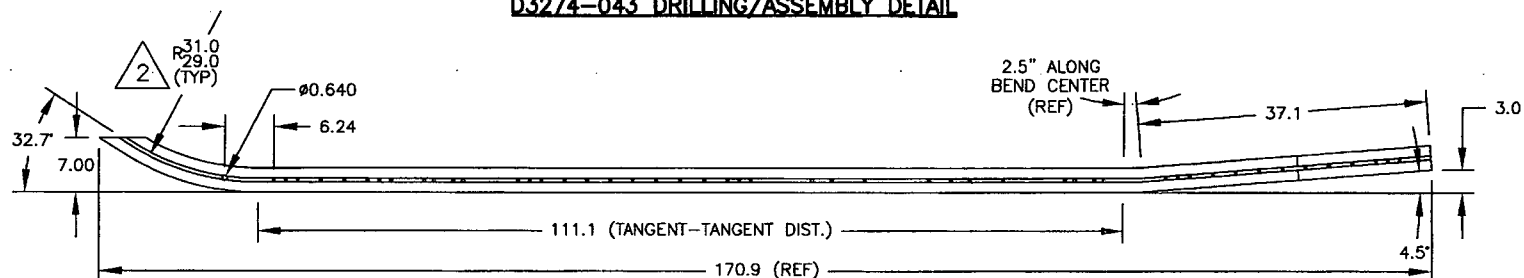




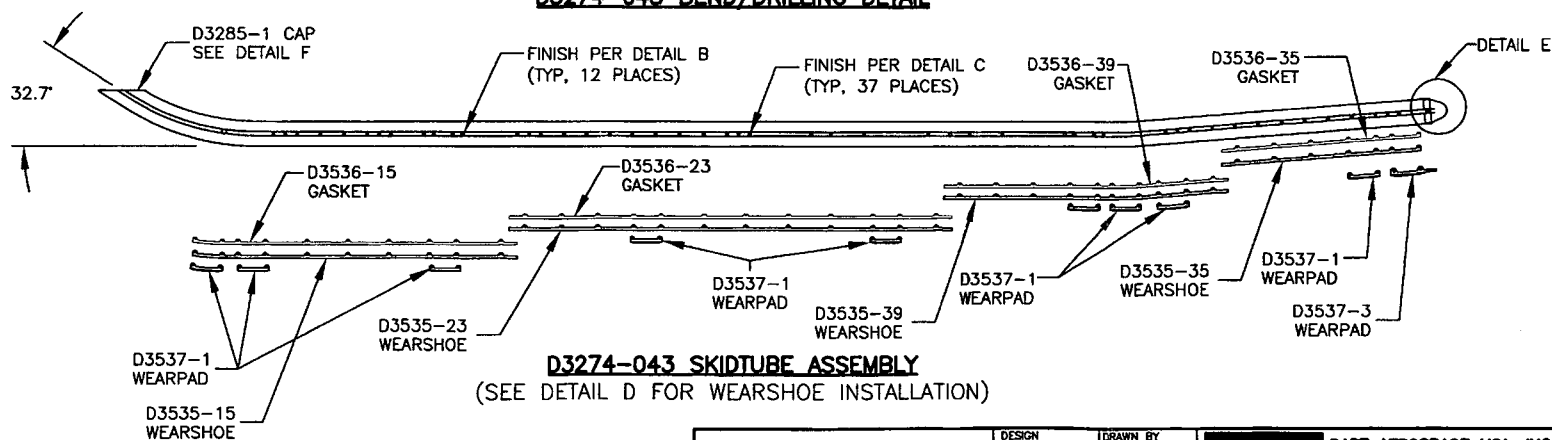
DEO ATTACHED



**D3274-043 DRILLING/ASSEMBLY DETAIL**



**D3274-043 BEND/DRILLING DETAIL**



**D3274-043 SKIDTUBE ASSEMBLY**  
(SEE DETAIL D FOR WEARSHOE INSTALLATION)

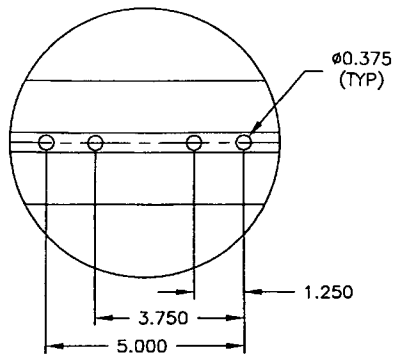
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07.02.12

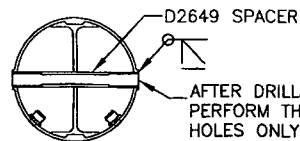
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DATE 06.12.19		TITLE SKIDTUBE ASSEMBLY		REV. D SHEET 3 OF 4 SCALE 1:15



### DETAIL A: DRILL DETAIL

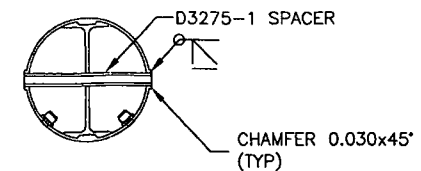


### DETAIL B FOR 0.375 HOLES ONLY

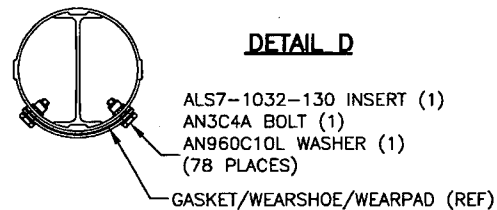


- AFTER DRILLING AND BENDING ASSEMBLY  
PERFORM THE FOLLOWING FOR 0.375  
HOLES ONLY:
1. CHAMFER HOLE 0.030x45°
  2. INSERT D2649 SPACER
  3. WELD INTO PLACE AND GRIND FLUSH
  4. C'BORE TO 0.313x0.75 DEEP

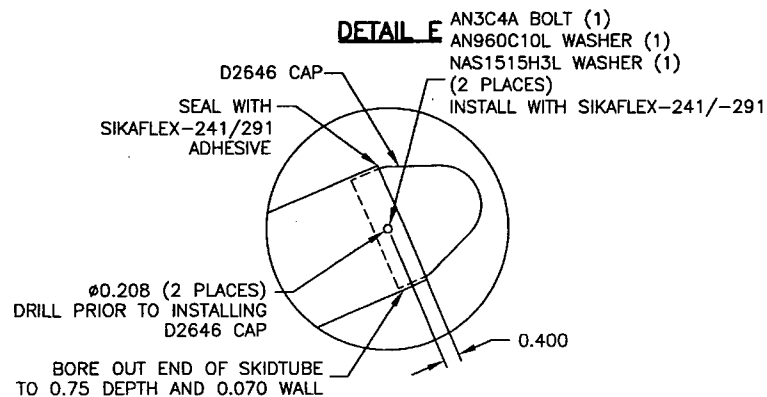
### DETAIL C FOR 0.313 HOLES ONLY



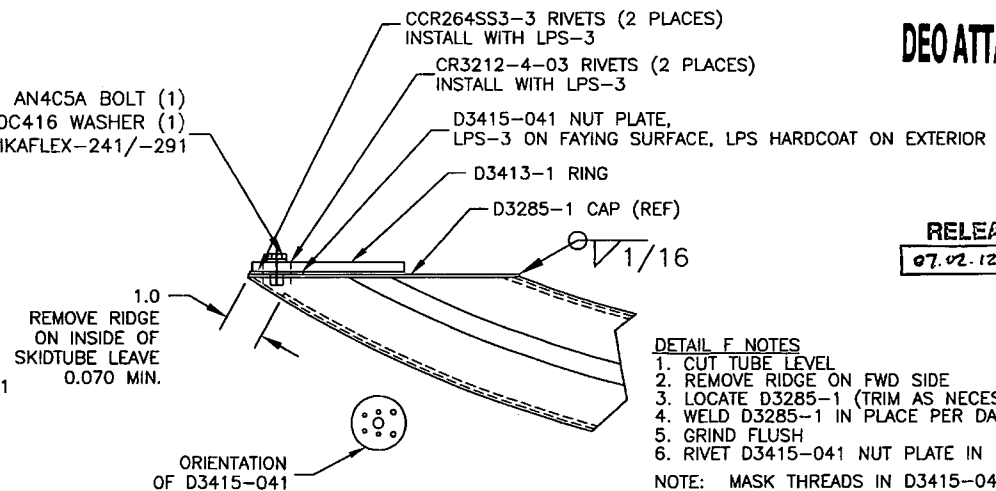
### DETAIL D



### DETAIL E



### DETAIL F: END FINISHING DETAIL



### DETAIL F NOTES

1. CUT TUBE LEVEL
  2. REMOVE RIDGE ON FWD SIDE
  3. LOCATE D3285-1 (TRIM AS NECESSARY)
  4. WELD D3285-1 IN PLACE PER DART QSI 004
  5. GRIND FLUSH
  6. RIVET D3415-041 NUT PLATE IN PLACE
- NOTE: MASK THREADS IN D3415-041  
PRIOR TO FINISH

DEO ATTACHED

RELEASED

07.02.12

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		CHECKED	APPROVED	D3274	SHEET 4 OF 4
		DATE		TITLE	SCALE
		06.12.19		SKIDTUBE ASSEMBLY	1:3



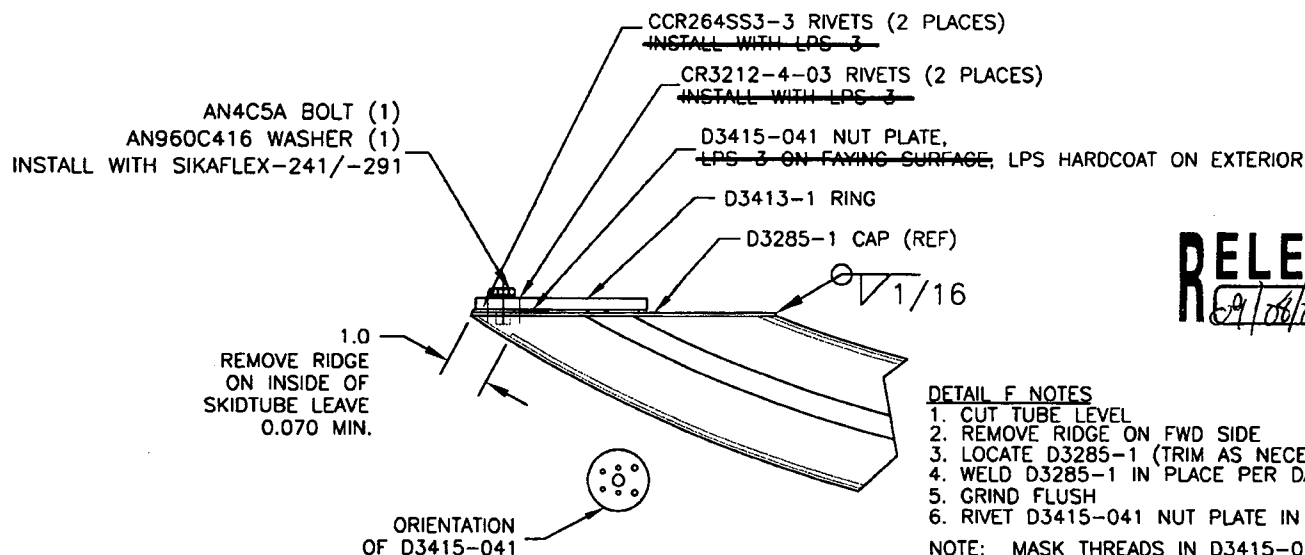
DRAWING NO. D3274	TITLE SKIDTUBE ASSEMBLY	REV. D	<b>DART AEROSPACE USA, INC</b>	D.E.O. NO. D3274-D-1	SHEET NO. SHEET 1 OF 1	SCALE NTS
DRAWN <i>UP</i>	CHECKED <i>L</i>	MFG. APPR. <i>A</i>	APPROVED <i>MAP</i>	DE APPR. <i>#</i>		
DATE 09.06.17	DATE 09.06.23	DATE 09/06/23	DATE 09/06/23	DATE 09.06.23		

LPS-3 IS NO LONGER USED DURING ASSEMBLY OF SKIDTUBE.

AMEND NOTE 8: ~~"SPRAY INSIDE OF TUBE WITH A COAT OF LPS LABORATORIES 'LPS 3' AFTER FINISH AND INSTALLATION OF INSERTS.~~  
COAT ALL EXPOSED FASTENERS WITH LPS LABORATORIES 'LPS PROCYON' AFTER FINAL ASSEMBLY, CLEAN EXCESS OFF  
POWDER COATING WITH MEK DEGREASER."

AMEND DETAIL F AS SHOWN:

### DETAIL F: END FINISHING DETAIL



#### DETAIL F NOTES

1. CUT TUBE LEVEL
2. REMOVE RIDGE ON FWD SIDE
3. LOCATE D3285-1 (TRIM AS NECESSARY)
4. WELD D3285-1 IN PLACE PER DART QSI 004
5. GRIND FLUSH
6. RIVET D3415-041 NUT PLATE IN PLACE

NOTE: MASK THREADS IN D3415-041  
PRIOR TO FINISH



NO. 261

AWS D17.1.2001  
QUALIFICATION TEST RECORD

Name: Barclay Elliott  
Job number: B69449  
Part number: D206 642 541  
Description: 206  
Welding Process: Tig[☒] Mig[ ]  
Base material: Aluminum  
Current: AC[☒] DC[ ]

TEST REQUIREMENTS AND RESULTS

Visual: pass[☒] fail[ ]  
Penetration: pass[☒] fail[ ]

UNACCEPTABLE

Cracks: pass[☒] fail[ ]  
Undercut: pass[☒] fail[ ]  
Pin holes: pass[☒] fail[ ]  
Overlap (cold lap): pass[☒] fail[ ]  
Porosity (surface): pass[☒] fail[ ]  
Coloration: pass[☒] fail[ ]

Qualifier Hal Summ Date of Test Coupon 11-08-11

Welder Barclay Elliott Date of Test Coupon 11-08-11

The above named individual is qualified in accordance with AWS D17.1.2001 to weld